

CLAIMS

1. A single layer interchange overpass comprising a main road (1) and an intersected road (3), characterized in that a U-shaped circle road (24) is provided at the horizontal level at both ends of the main road (1), an inner semicircle road (4) and an outer semicircle road (5) are provided at the exit of said U-shaped circle road (24), a common road (7) is provided between said inner semicircle road (4) and said outer semicircle road (5), said common road (7) is connected to an on-ramp of said intersected road (3) passing through under said outer semicircle road (5), an off-ramp of said intersected road (3) is connected to the on-ramp of the main road (1) through the inner semicircle road (4).

2. The single layer interchange overpass of claim 1, wherein an arched separated bridge (2) is provided on the main road (1), semi-ramped overhead bridge stages (8) are provided on the intersected road (3) on both sides of the arched separated bridge (2), the said semi-ramped overhead bridge stage (8) is connected with said arched separated bridge (2) through a connection platform (23), U-shaped circle roads (24) are provided on the horizontal level on both ends of the arched separated bridge (2), an arcuate end (25) of said outer semicircle road (5) and the inner semicircle road (4) of the said U-shaped circle road (24) is above the upper side of the ramp of the arched separated bridge (2), the other end of the outer semicircle road (5) and inner semicircle road (4) of the U-shaped circle road (24) is connected to the connection platform (23), a branch common road (7) is provided on the off-ramp of the arched separated bridge (2) of the main road (1), the other end of the common road (7) is connected to the connection platform (23), a right turn road (9) is provided on the entrance (18) of the upper and lower U-shaped circle roads (24), and the other end of the right turn road (9) is connected to the on-ramp of the arched separated bridge (2).

3. The single layer interchange overpass of claim 2, wherein said connection platform (23) connecting said arched separated bridge (2) and said semi-ramped overhead bridge stage (8) is constructed at the same level as the U-shaped circle road (24).

4. The single layer interchange overpass of claim 2, wherein said height of the arcuate end (25) of the U-shaped circle road (24) is higher than the connection platform (23) which connects the arched separated bridge (2) and the semi-ramped overhead bridge stage (8).

5. The single layer interchange overpass of claim 2, wherein a convergent secondary road (17) is provided at the intersection of the driveways of the inner semicircle road (4) and the arched separated bridge (2).

6. The single layer interchange overpass of claims 1 or 2 wherein an underpass tunnel (6), or a semi-sinking type tunnel, or an overhead main road bridge constructed higher than the overpass itself is provided over the intersected road (3).

7. The single layer interchange overpass of claim 1, wherein the main road (1) is a leveled driveway, the intersected road (3) is an overhead bridge (29), the said U-shaped circle road (24) comprises the inner semicircle road (4) and the outer semicircle road (5), and the common road (7) is connected with the entrance of the outer semicircle road (5) of the U-shaped circle road (24) on other side of the overhead bridge (29) after passing through under the overhead bridge (29), and the inner semicircle road (4) is connected to the on-ramp of the main road (1) through the left turn driveway (14).

8. The single layer interchange overpass of claim 7 wherein a right turn branch lane (31) is provided on the off-ramp of the said overhead bridge (29), the right turn branch lane (31) is connected to the on-ramp of the main road (1), the right turn road (32) is provided on the off-ramp of the main road (1), and the right turn road (32) is connected with the on-ramp of the overhead bridge (29).

9. The single layer interchange overpass of claim 8, wherein an outer pass way (33) connected with an outer secondary road (13) of the main road (1) is provided on said right turn road (32).

10. The single layer interchange overpass of claims 2 or 7, wherein a bi-directional driveway having an off-ramp and an on-ramp is used in the arched separated bridge (2) and the semi-ramped overhead bridge stage (8).